

304

JOURNAL OF THEORETICAL BIOLOGY

QH
301
J75

Chief Editor: J. F. DANIELLI

Editorial Board:

E. A. BARNARD
M. CALVIN
B. G. CRAGG
H. EYRING
D. A. GLASER
D. MAZIA
A. ROBERTSON
C. H. WADDINGTON
L. WOLPERT
M. YČAS
J. Z. YOUNG

VOLUME 15

April to June 1967



ACADEMIC PRESS
London and New York

Copyright © 1967, by Academic Press Inc. (London) Ltd.

ALL RIGHTS RESERVED

No part of this volume may be reproduced in any
form, by photostat, microfilm, or any other means,
without written permission from the publishers.

Printed in Great Britain

Contents of Volume 15

Number 1, April 1967

WALTER, C., The Practicality of the Use of the Steady-state Assumption and the Inflection Point Method in Enzyme Kinetics	1
DE ROCCO, A. G., On a Generalization of the Theorem of Hamaker and de Boer: The Interaction of Spherical Colloids in Solution	34
REANNEY, D. C. and RALPH, R. K., A Speculation on the Origin of the Genetic Code	41
ULLRICK, W. C., A Theory of Contraction for Striated Muscle	53
PARSEGIAN, V. A., Evidence for Long-range Repulsion between Bi- molecular Leaflets of Lecithin: An Examination of Structural Data	70
KOCH, A. L., Metabolic Control through Reflexive Enzyme Action	75
RUBIN, J., Optimal Classification into Groups: An Approach for Solv- ing the Taxonomy Problem	103
SEMENZA, G., Rate Equations of Some Cases of Enzyme Inhibition and Activation—Their Application to Sodium-activated Membrane Transport System	145
ERRATA	177

Number 2, May 1967

EDITORIAL	179
TRUCCO, E., Collection Functions for Non-equivariant Cell Populations	180
WILLIAMS, F. M., A Model of Cell Growth Dynamics	190

CONTENTS

WALTER, C., PARKER, R. and YČAS, M., A Model for Binary Logic in Biochemical Systems	203
PARKER, R. D. and LINCOLN, T. L., Parameters Deducible from the Kinetics of Enzyme Induction and Repression	213
FONG, P., Dynamical Basis of the Helical Structure of DNA	225
FONG, P., Packing of the DNA Molecule	230
JEHLE, H., Structural Aspects of the Coding Problem	235
EHRET, C. F. and TRUCCO, E., Molecular Models for the Circadian Clock: I. The Chronon Concept	240
EHRET, C. F., Paratene Theory of the Shapes of Cells	263

Number 3, June 1967

EDITORIAL	211
PATTON, S. and FOWKES, F. M., The Role of the Plasma Membrane in the Secretion of Milk Fat	214
ROSEN, R., Two-factor Models, Neural Nets and Biochemical Automata	232
GROSS, L., Active Membranes for Active Transport	298
O'BRIEN, J. S., Cell Membranes—Composition: Structure: Function	307
GOEL, N. S., Kinetics of Replication of Copolymeric DNA	319
OHKI, S., Application of the Lattice Gas Theory to Lipid Monolayers	330
OHKI, S. and FUKUDA, N., Interlayer-interaction for a Lipid Bilayer Model	331